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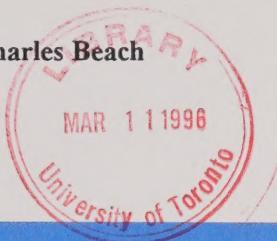
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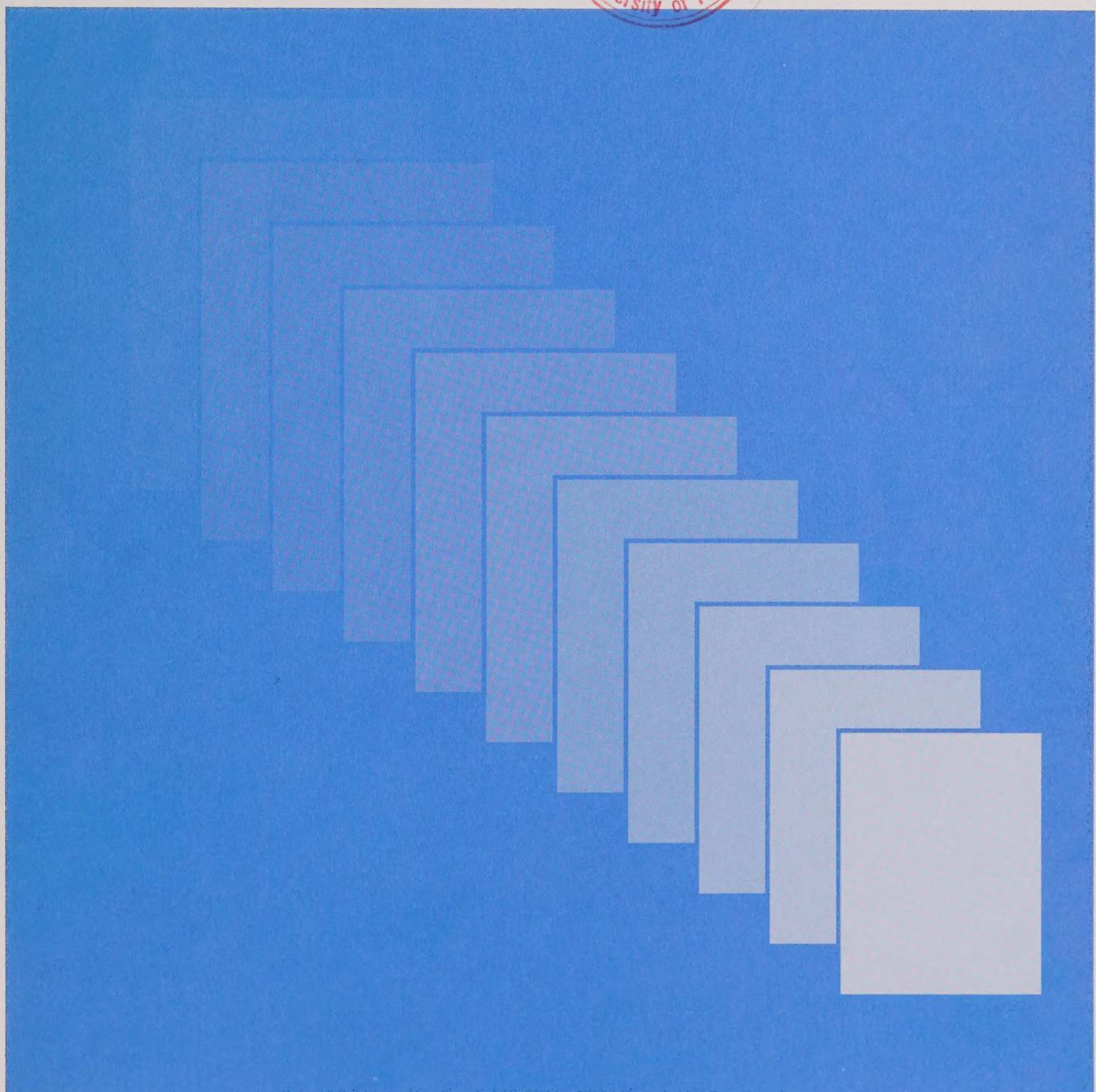
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The Evolution of Payroll Taxes in Canada: 1961 - 1993

by Zhengxi Lin, Garnett Picot and Charles Beach



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Abstract

This paper outlines the structure of payroll taxes and documents evidence on the level, growth and role of each component over the last three decades for Canada and for each province. Levied by both the federal and provincial governments, payroll taxes in Canada include four major components: i) unemployment insurance (UI) premiums; ii) Canada/Quebec Pension Plan (C/QPP) contributions; iii) workers compensation (WC) premiums; and iv) the provincial health/post-secondary education (H/E) tax levied by Quebec, Manitoba, Ontario and Newfoundland. While the UI and C/QPP components are levied on both employers and employees, the WC and H/E components are levied on employers only. Our main findings are 1) payroll taxes have increased substantially over the last three decades in Canada as a whole and in every province; 2) the structure, level, growth and role of each component of payroll taxes vary remarkably from one province to another; 3) the expansion of the UI component in recent years has been the largest contributor to the rise in payroll taxes across every province in the country; and 4) despite significant growth in recent years, payroll taxes are still much lower in Canada than in most other western industrialized countries.

JEL classification: E62 --- Taxation; H25 --- Business Taxes

Key words: supplementary labour income, employer payroll taxes, employee payroll taxes, effective payroll tax rates

Introduction

Payroll taxes are a large and growing source of government revenues in Canada. Levied by both federal and provincial governments, they include four major components: i) unemployment insurance (UI) premiums; ii) Canada/Quebec Pension Plan (C/QPP) contributions; iii) workers compensation (WC) premiums; and iv) the provincial health/post-secondary education (H/E) tax that currently exists in Quebec, Manitoba, Ontario and Newfoundland. While the UI and C/QPP components are levied on both employers and employees, the WC and H/E components are levied on employers only.

The employer portion of payroll taxes is part of indirect labour costs, and there is considerable debate over whether and how employers react to such taxes. They may react by reducing labour demand, substituting other factors of production for labour, or adopting new labour-saving technology. Alternatively, they could raise prices on their output, or reduce wage increases they would otherwise be willing to pay. In the former case, the result would be a loss of jobs in the economy. And in the latter case, the actual burden of the taxes could, in the long run, be partially or fully passed onto consumers through higher prices or onto labour through lower wages. These issues are being debated.

Levied on employees, payroll taxes reduce take-home earnings, and workers may react by reducing labour supply, or demanding higher pre-tax wages. The result would also imply a lower level of employment in the economy, or higher labour costs to employers and hence lower labour demand. These issues are also being debated.

From an equity point of view, it is important to know who ultimately pays for the tax. In a period of high unemployment, it is equally important to know whether and to what extent increases in payroll taxes cost jobs. Furthermore, since UI premiums and C/QPP contributions are not fully proportional to wages and salaries, but rather start at certain minimum and cease at certain maximum, they are a form of quasi-fixed labour costs that may provide employers with financial incentives to control employees' weekly hours of work (i.e., increasing hours for "core" employees and decreasing hours for others) to minimize premium contributions.¹ The way UI premiums and C/QPP contributions are currently charged may indeed contribute to the rising polarization of weekly hours of work in the Canadian labour market in recent years.²

Given that a certain level of taxes has to be raised, there is also the issue of effects of payroll taxes relative to other forms of taxation. It is important that the possible economic impacts of payroll taxes be placed within the context of alternative forms of taxation.

Despite enormous public interest as well as wide-ranging policy implications, overall payroll taxes have received relatively little attention until very recently. Numerous work [e.g., Dahlby (1992,

¹ Premium contributions are currently charged based on employees' weekly earnings. Employers pay premiums only on the employee's weekly earnings that are within the taxable range. No premium is paid if the employee's weekly earnings are below the minimum or on the amount above the maximum.

² This trend is well documented in Morissette, Myles and Picot (1995).

1993), Kesselman (1994)] has focused on explaining and comparing the basic features of the provincial H/E payroll tax systems, but these provincial H/E taxes amount to under 15% of all payroll taxes. Although a number of papers with broader scope have surfaced lately, they often cover only part of the taxes.³ Basic facts regarding overall payroll taxes, such as the structure, the level, the growth and the role of each component in Canada and the provinces, are not readily available. The objective of this paper is to fill this gap.

As mentioned earlier, payroll taxes in Canada are levied by both the federal and provincial governments. The tax structure is rather complex, varying significantly from one province to another for a number of reasons. In the case of federal taxes (UI and C/QPP), although the legislated tax rates are uniform across the country, the effective tax rates can vary substantially due to the differing payroll mix across provinces. In the case of workers compensation premiums, the legislated tax rates are set provincially. And in the case of provincial H/E tax, some provinces levy it while others do not; and among those levying it, the legislated tax rates differ substantially. Thus, it is necessary to understand the structure of these taxes. Therefore, the paper begins by outlining the components of payroll taxes by province, and then goes on to focus on the level, the growth and the role of each component by province over the last three decades.

1. Data and Structure

The employer portion of payroll taxes is derived mainly from supplementary labour income (SLI) estimates of the Labour Division of Statistics Canada,⁴ and the employee portion of UI premiums and C/QPP contributions is calculated using the corresponding fixed ratios between employer and employee contributions (see detailed discussion later).

Supplementary labour income includes five major components: unemployment insurance (UI) premiums; Canada/Quebec Pension Plan (C/QPP) contributions; private pension plan contributions; workers compensation (WC) premiums; and various benefits under the umbrella of "welfare" benefits such as accident and sickness insurance premiums, administrative services only contracts, group life insurance premiums, provincial hospital and medical insurance premiums, and accident/sickness insurance premiums paid to non-profit organizations such as Blue Cross, Greenshields and the Maritime Hospital Association⁵.

³ For example, despite covering all four components of the tax, Picot, Lin and Beach (1995) is limited to the tax levied on employers. Employees' portion of the tax is not addressed. Di Matteo and Shannon (1995) is a recent exception.

⁴ The provincial health and post-secondary education tax for Manitoba and Newfoundland is not available in the SLI data and hence was obtained from Kesselman (1994).

⁵ Accident and sickness insurance comprises accidental death and dismemberment insurance, disability insurance, drug expenses and supplementary hospital and dental insurance. Administrative services only contracts refer to arrangements between employers and insurance companies, whereby employers assume the risk of insuring their own employees and simply reimburse the insurance companies for benefits paid out and associated administrative costs. The range of benefits covered by ASO contracts includes short- and long-term disability insurance, extended health care insurance, and dental insurance. The "welfare" benefits are so organized to reflect the different data sources upon which they are derived. For example, the A/S insurance premiums are derived from data extracted from the annual Report of the Superintendent of Insurance (RSI), coupled with the Report of the Superintendent of Insurance for the province of Quebec (QRSI) and the annual survey of health insurance benefits of the Canadian Life and Health Insurance Association.

Not all components of supplementary labour income are payroll taxes. In this paper, only those SLI components and sub-components that are mandated by either federal or provincial legislation are considered payroll taxes.

All provinces in Canada have universal hospital and medical care insurance. Each province funds its plan either indirectly through the various means of taxation available to them or directly through premiums charged on participants of the plans. Currently, only Alberta [Alberta Health Insurance Plan (AHIP)] and British Columbia [British Columbia Medical Services Plan (BCMSP)] charge health insurance premiums on program participants. Ontario used to charge health care premiums (OHIP) on plan participants from 1959 to 1989. Since 1990, the health care plan is partially funded through revenues generated from the Employer Health Tax (EHT). Quebec began to finance, in part, its health care program through the Health Services Fund (HSF), a payroll tax levied on employers, in 1970. Manitoba and Newfoundland started to finance a portion of both their health care and post-secondary education systems through payroll taxes on employers in 1982 and 1990, respectively. Health care in the rest of the provinces is financed through general revenues. If employers assume part or all of health care premiums on behalf of their employees, these costs are deemed to be part of supplementary labour income but not necessarily payroll taxes. That is, AHIP, BCMSP and OHIP premiums (1959-1989) charged by Alberta, British Columbia and Ontario and paid by employers on their employees' behalf are not payroll taxes. Only the H/E tax in Quebec (since 1970), Manitoba (since 1982), Ontario and Newfoundland (since 1990) are considered payroll taxes.

Beyond health care premiums/taxes, employers pay various other forms of supplementary labour income either directly to their employees or indirectly on their behalf. While UI premiums, C/QPP contributions and WC premiums are all payroll taxes since they are mandated by either federal or provincial legislation, employers' contributions to employees' private pension plan and the majority of "welfare" benefits are not considered payroll taxes because employers pay these benefits either on a voluntary basis or as a result of collective bargaining rather than being legislated to do so. Table 1 outlines the components of payroll taxes in Canada.

Table 1: Components of Payroll Taxes in Canada

Name of Tax	Authority	Contributor	Effective
Unemployment Insurance (UI)	Federal Government	Employers; Employees	1940
Canada/Quebec Pension Plan (C/QPP) ^a	Federal Government	Employers; Employees	1966
Workers Compensation (WC)	Workers Compensation Boards	Employers	1910s
Health Services Fund (HSF)	Government of Quebec	Employers	1970
Health and Post-Secondary Education Tax Levy	Government of Manitoba	Employers	1982
Employer Health Tax (EHT) ^b	Government of Ontario	Employers	1990
Health and Post-Secondary Education Tax	Government of Newfoundland	Employers	1990

a Employees in the province of Quebec are covered by the Quebec Pension Plan, which is run by the provincial government of Quebec.

b Ontario used to charge health care premiums from 1959 to 1989. Although approximately 65 percent of premiums were paid by employers on behalf of their employees as fringe benefits [Dahlby (1993)], these are not legislated and hence not payroll taxes.

Unemployment Insurance Premiums

UI premiums have been charged by the federal government on both employers and employees to finance the UI program since 1940. The UI system is self-financing and the premium rate is set annually using a statutory rate as a benchmark, which is determined based on a three-year average of the program costs. If the UI account is projected to run a cumulative deficit, the actual premium rate would be higher than the statutory premium rate, and vice versa.

Both employer and employee UI premiums depend on the weekly hours of work and weekly earnings of the worker. In 1994, the UI system covered all wage and salary employees who worked at least 15 hours or earned a minimum of \$156 per week.⁶ The maximum insurable earnings (MIE) per employee were set at \$780 per week. Each employee covered by the program paid to the system at a premium rate of 3.07% of the insurable earnings up to the MIE for a maximum annual premium of \$1,245. Employers paid 1.4 times the employee rate⁷ (i.e., 4.298% of the employee's insurable earnings up to the MIE in 1994) for a maximum annual premium of \$1,743 per employee covered.⁸

⁶ Self-employed workers are excluded from coverage of the UI system except self-employed fishermen, who are covered for income support during the off season under separate regulatory rules.

⁷ Employers have been paying 1.4 times the employee rate since 1971. Prior to 1971, employers and employees contributed at equal rates which varied across different levels of earnings.

⁸ See Government of Canada (1994) for more details on the Canadian UI system and Lin (1995) for empirical evidence on UI coverage exclusion.

Canada/Quebec Pension Plan Contributions

The federal/Quebec governments have levied a payroll tax on both employers and employees to finance the Canada/Quebec Pension Plan since 1966. The contribution rate is set according to the actuarial rate reviewed every five years by the Office of the Superintendent of Financial Institutions. In 1994, the maximum pensionable earnings (MPE) per employee were set at the average industrial wage of \$34,400, with an exemption level equal to 10% of the MPE (\$3,440). Wage and salary employees and their employers paid equally to the program at a separate contribution rate of 2.6% of pensionable earnings up to the MPE for a maximum annual contribution of \$894. Self-employed workers paid both the employee's and employer's contribution at a combined rate of 5.2% of pensionable earnings up to the MPE for a maximum annual contribution of \$1,788.⁹

Workers Compensation Premiums

Employers also pay provincial payroll tax in the form of workers compensation premiums to finance the workers compensation programs run by the provincially-administered Workers Compensation Boards (WCBs). The Canadian workers compensation system traces its origins back to the 1910s. Ontario was the first province to pass WC legislation in 1914. By 1918, six of the nine then existing provinces had such legislation. And the Association of Workers Compensation Boards of Canada (AWCBC) was formed in 1919.

The workers compensation system is based on industry groupings with different collective liability assessment and varying degrees of experience rating (i.e., premiums vary according to the hazard or risk of use of workers compensation). This approach is used in all provincial and territorial jurisdictions except Prince Edward Island, Nova Scotia and the North West Territories. An employer may have its operation classified into more than one industry with different assessment rates. The system further allows some degree of experience-rating within the broad industrial categories, resulting in different assessment rates for employers in the same industry. The number of separate assessment rates across the country ranges from only five in Yukon to 357 in Quebec. Despite many similarities, there are significant differences in the industrial classification systems and practices across the 12 jurisdictions.¹⁰

Provincial Health and Post-Secondary Education Tax

Finally, Quebec, Manitoba, Ontario and Newfoundland levy a payroll tax on employers to partly finance their health care/post-secondary education systems.¹¹ The basic features of each province's H/E payroll tax is summarized in Table 2.

Quebec was the first province to impose the tax in 1970, followed by Manitoba in 1982, and Ontario and Newfoundland in 1990. In 1993, legislated basic provincial H/E tax rates ranged from

⁹ See Government of Canada (1995) for further details on the Canada Pension Plan.

¹⁰ See Vaillancourt (1994) for further details on the financing of the Canadian workers compensation system.

¹¹ In practice, however, revenues generated from these payroll taxes (except those of Quebec) flow into the provincial consolidated revenue funds and can thus be used for other purposes.

a low of 1.95% in Ontario to a high of 3.75% in Quebec. Relief for small businesses was allowed in all provinces except Quebec through lower effective tax rates.¹² The tax coverage was comprehensive for virtually all employers in the private, non-profit, quasi-public and public sectors. Some specific exemptions applied in some provinces.¹³

The H/E tax has become a generator of large tax revenues for all the four provinces employing it. In 1993, revenues generated through the tax ranged from a high of 11.9% of Quebec's total tax revenues to a low of 4.8% in Newfoundland. The tax was the fourth largest source of taxation revenues for Manitoba, Ontario and Newfoundland, and the third largest for Quebec.¹⁴

¹² They included an exemption in Newfoundland, an exemption with a notch range in Manitoba and a series of graduated rates in Ontario. While Manitoba and Newfoundland do not cover self-employed workers, Quebec and Ontario extended the tax coverage to net self-employment income in 1993 with varying exemption levels not available to ordinary employer payrolls. Quebec initially included the self-employed in the tax from 1970, but this provision was abolished after 1977. It now also includes non-employment income in the tax coverage.

¹³ Ontario grants no exemption of coverage to any employer. Quebec allows exemptions for employers that trade internationally. Manitoba exempts those commercial truckers that supply services to out-of-province clientele. And Newfoundland grants a tax relief to employers in the renewable resource sectors (fishing, forestry and farming) in the form of reduced tax rate.

¹⁴ See Kesselman (1994) for further details on the features and history of the provincial health and post-secondary tax.

Table 2: Key Features of the Provincial Health and Post-Secondary Education Tax, 1993

	Quebec	Manitoba	Ontario	Newfoundland
Name of Tax	Health services fund	Health and post-secondary education tax levy	Employer health tax	Health and post-secondary education tax
Effective	November 1970	July 1982	January 1990	August 1990
Tax Rate (%)	3.75	2.25	1.95	2.0
Relief for Small Business	None	\$600,000 payroll exemption; "notch" rate of 4.5% from \$600,000 to \$1,200,000 of payroll ^b	Graduated scale of rates for payrolls under \$400,000, beginning at 0.98% for payrolls under \$200,000	\$100,000 payroll exemption; no "notch" rate
Self-Employed Coverage	Yes, above \$5,000 (including non-employment income), 1% rate with ceiling	No	Yes, above \$40,000 of total net self-employment income at graduated rates	No
Exempt or Tax-Preferred Sector	International trade and finance	Commercial truckers for out-of-province services	None	Renewable resource sectors (fishing, forestry and farming) taxed at the rate of 1%
% of Provincial Total Tax Revenues	11.9	7.1	8.6	4.8
Rank in Provincial Taxes ^a	3rd largest; after PIT and RST	4th largest; after PIT, RST and MFT	4th largest; after PIT, RST and CIT	4th largest; after RST, PIT and MFT

a PIT --- Personal income tax; RST --- Retail sales tax (administered as part of the GST in Quebec); MFT--- Motor fuel tax; and CIT --- Corporate income tax.

b Exemption rose to \$750,000 at beginning of 1994, with "notch" rate applied from \$750,000 to \$1,500,000.

Source: Kesselman (1994).

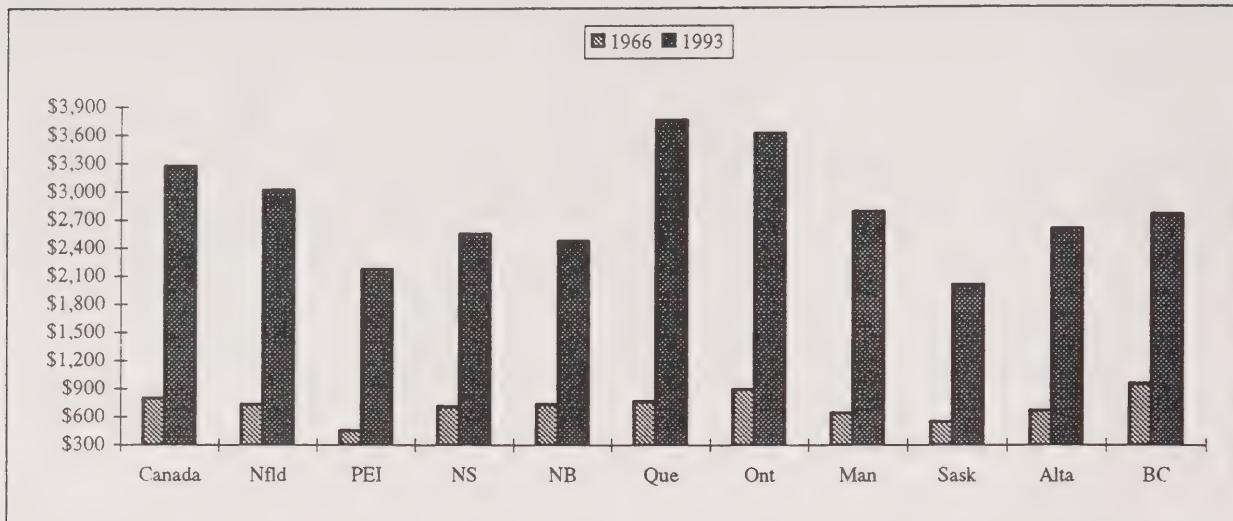
2. Level, Growth and Role of Component

This section reports the empirical evidence on the level, the growth and the role of each component of payroll taxes in Canada and in each province over the last three decades. Complete annual data by component and by province covering the whole period of 1961 to 1993 are available upon request from the authors in many machine-readable forms.

Payroll Taxes per Employee

Revenues generated from payroll taxes paid by both employers and employees have grown tremendously since the 1960s in Canada. Expressed in 1993 constant dollars (using GDP price index), payroll taxes per employee rose from the national average of \$803 in 1966 to \$3,273 in 1993. As shown in Figure 1, there are substantial variations in average payroll taxes per employee across the provinces, ranging in 1993 from the high of about \$3,750 in Quebec and \$3,600 in Ontario to the low of around \$2,170 in Prince Edward Island and \$2,000 in Saskatchewan.

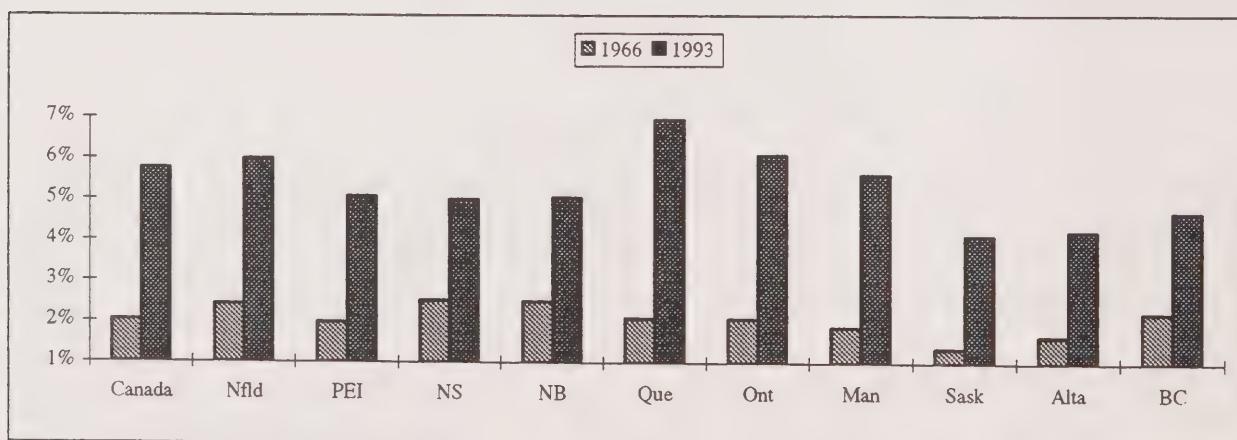
Figure 1: Average Payroll Taxes per Employee by Province in Canada (1993 dollars)



Payroll Taxes as Percentage of GDP

Similar trends are observed when payroll taxes are expressed as a percentage of GDP. Nationwide, total payroll taxes paid by employers and employees rose from 2.0% of GDP in 1966 to 5.8% in 1993. There are again significant variations across provinces. In 1993, revenues generated through payroll taxes were at the high of 6.9% and 6.1% of GDP in Quebec and Ontario, and at the low of 4.1% and 4.2% of GDP in Saskatchewan and Alberta (see Figure 2).

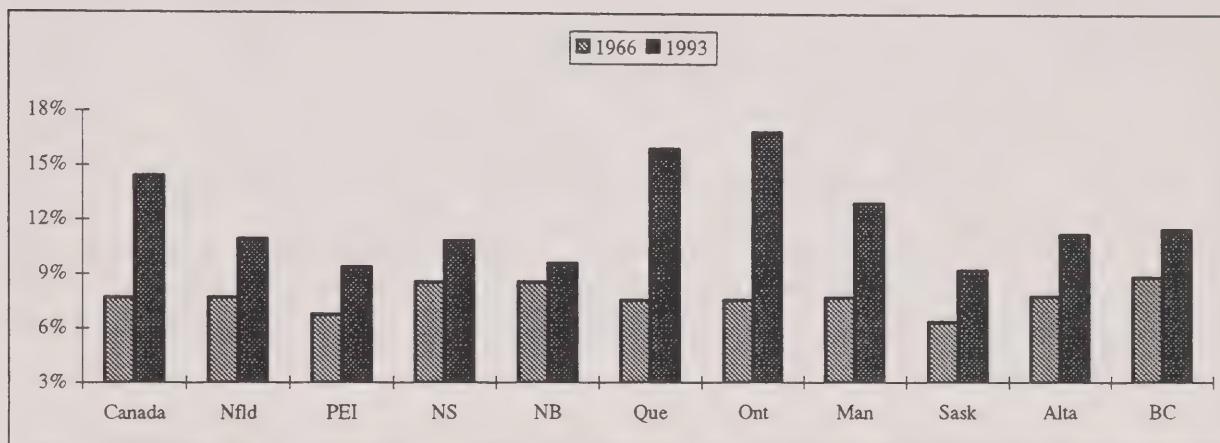
Figure 2: Payroll Taxes as % of GDP by Province in Canada



Payroll Taxes as Share of Government Revenues

Similar trends are also observed when payroll taxes are expressed as a share of total federal and provincial government revenues. In Canada as a whole, the share of total federal and provincial government revenues generated through payroll taxes paid by both employers and employees rose from 7.7% in 1966 to 14.4% in 1993. As shown in Figure 3, payroll taxes represent a more important source of revenue in some provinces than in others. In 1993, payroll tax revenues represented the high of 16.9% and 15.9% of total federal and provincial revenues in Ontario and Quebec, and the low of 9.2% and 9.4% in Saskatchewan and Prince Edward Island.

Figure 3: Payroll Taxes as % of Federal and Provincial Revenues by Province in Canada



The Effective Payroll Tax Rate

To conduct further analysis, we look to the tax rate. Unfortunately, legislated tax rates for the different components are not comparable, because the base upon which the tax amount is calculated differs across the components. For the federal taxes (UI and C/QPP), the legislated tax rate is applied to each employee's level of compensation. Taxes are paid only on the portion of the remuneration that falls within the taxable range; no tax is paid if the remuneration is either below the exemption level or on the amount above the maximum taxable level. However, the provincial taxes (WC and H/E) are based on total payrolls of the employer and other types of compensation regardless of the level of individual workers' earnings. The tax base includes the full range of federally taxable personal earnings such as wages, salaries, overtime compensation, vacation pay, commissions and performance bonuses along with all fringe benefits except employers' contribution to employees' private pension plan. Thus, comparisons of legislated tax rates, either over time or among provinces, are not meaningful.

To overcome this difficulty, we calculate and compare the effective payroll tax rate --- total payroll tax revenues raised in each province expressed as a percentage of total wages and salaries. Thus, the same base is used for the calculation of the tax rate for all components and in all provinces.

For Canada as a whole, the total effective payroll tax rate has risen from 2.1% in 1961, to 3.9% in 1971, to 6.5% in 1981, and to 11.6% in 1993. This increase has been due to both the introduction of C/QPP in 1966 and the health/education tax by the four provinces at different times, and increases in existing taxes. There are considerable variations in both the level and growth of the effective payroll tax rates across components as well as across provinces.

Differentials across Components

UI has become the largest component of payroll taxes since mid-1970s. By 1993, UI premiums amounted to 45% of all payroll tax revenues raised in Canada (see Figure 4). Between 1961 and 1993, UI premiums also underwent the fastest growth among the four components. The national effective UI premium rate rose from 1.4% in 1961 to 3.7% in 1990 and reached 5.2% in 1993 (see Figure 5). This growth trend very much mirrors the various UI reforms and business cycles in the economy. There were three periods of rapid increase: immediately following the 1972 UI Act amendments, around the 1981-82 recession, and during and following the 1990-92 recession. The rate did not fall significantly, however, during business cycle expansions.

Since its inception in 1966, C/QPP contributions were the largest component until mid-1970s and the second largest component ever since (amounting to 28% of all payroll taxes raised in Canada in 1993). In terms of growth, the effective C/QPP contribution rate has changed relatively little --- gradually declining until around mid-1970s and marginally rising since then. It was 2.4% in 1966, marginally declining to 2.0% by 1973, slowly rising back to 2.4% by 1985 and steadily increasing to 3.3% by 1993.

Figure 4: % Distribution of Payroll Taxes among Components in Canada, 1993

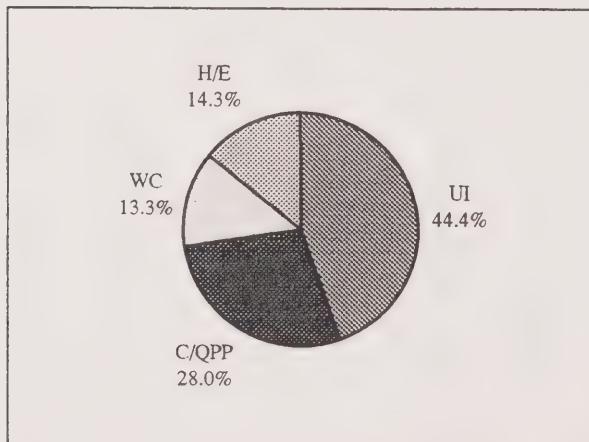
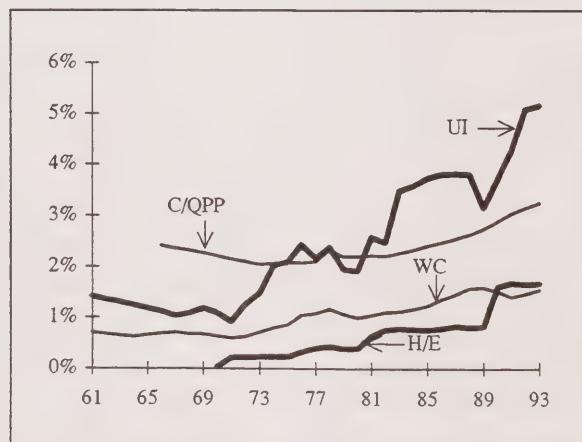


Figure 5: Effective Payroll Tax Rates by Component in Canada, 1961-1993



Workers compensation premiums were the third largest component until 1989 and have become the smallest among the four components since 1990 (representing 13% of payroll tax revenues raised in Canada in 1993). The effective WC premium rate was stable up to 1975. Since then it has been on the rise slowly but steadily, from 0.7% in 1961 to 0.9% in 1975 and to 1.5% in 1993.

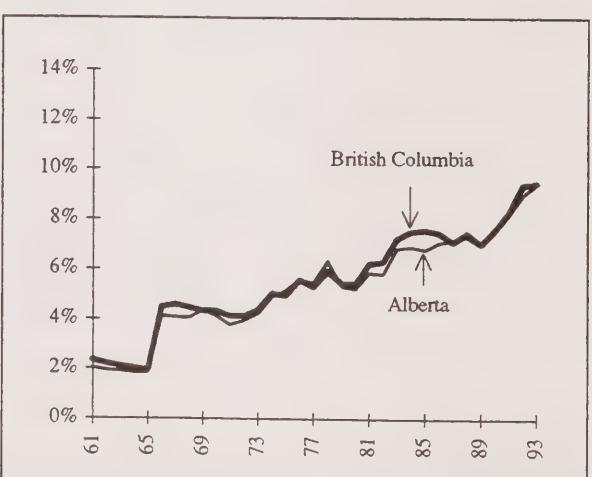
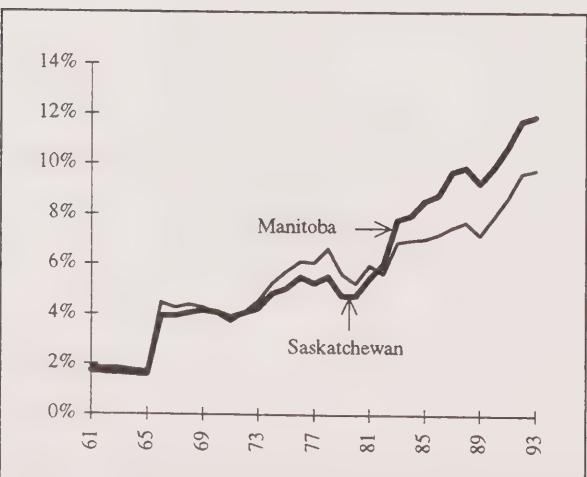
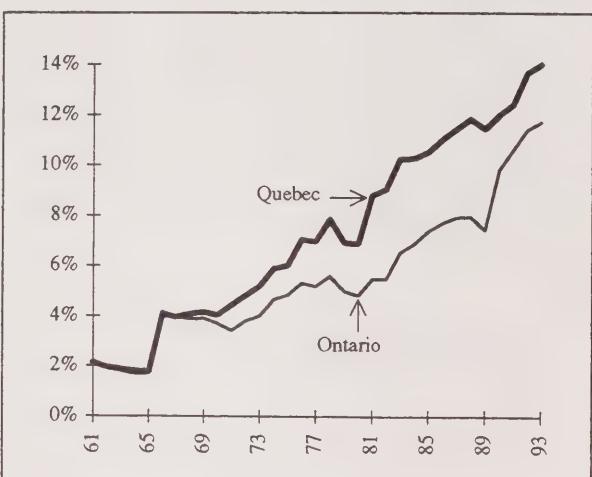
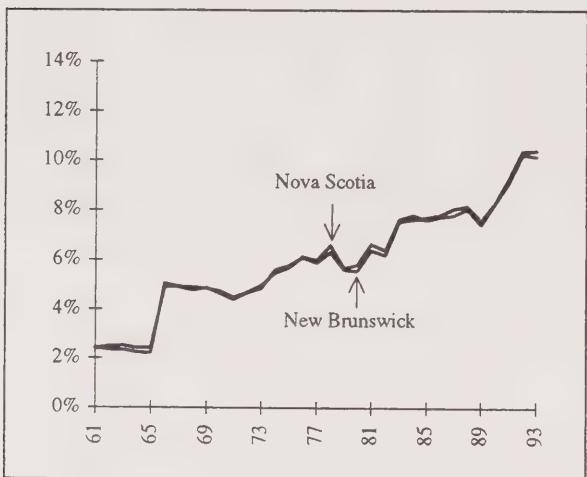
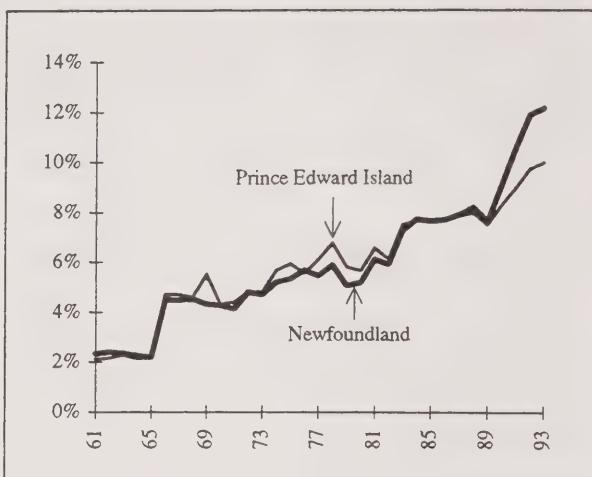
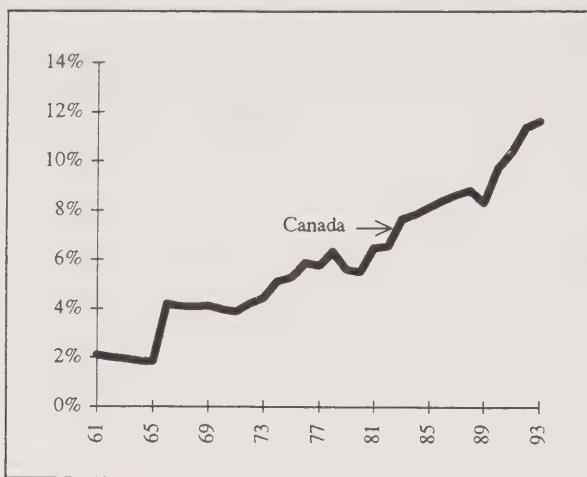
The health and post-secondary education component of payroll taxes has become significant recently. Quebec was the first province to levy a payroll tax for health care purposes on employers in 1970. Manitoba followed suit in 1982. As Ontario and Newfoundland joined force in 1990, these four provincial H/E taxes have replaced WC to become the third largest component (representing 14% of all payroll tax revenues in Canada in 1993) and the effective H/E tax rate has also increased substantially (doubled from 0.8% in 1989 to 1.6% in 1990). The rate has been stable since then at around 1.7%.¹⁵

Differentials among Provinces

As shown in Figure 6, Quebec had the highest effective payroll tax rate. For every \$100.00 of wages and salaries in 1993, Quebec employers and their employees paid \$14.00 to both the federal government and the provincial government as payroll taxes to fund unemployment insurance, Quebec Pension Plan, workers compensation and health care. This is followed by Newfoundland at \$12.14, Manitoba at \$11.90 and Ontario at \$11.70. The western provinces had the lowest rates (Alberta's payroll taxes were at \$9.42 for every \$100.00 of wages and salaries in 1993, British Columbia's at \$9.46 and Saskatchewan's at \$9.74). The differences between the provinces stem largely from higher effective workers compensation rates (in the 1.7% range in Quebec, Newfoundland and Ontario as compared to around 1.2% in most other provinces), and the fact that there is a health/education payroll tax in Quebec, Manitoba, Ontario and Newfoundland. Quebec had the highest effective payroll tax rate largely because it had the highest effective H/E tax rate at 3.6%, versus from 1.4% to 1.8% in the other three provinces.

¹⁵ In Ontario, some employers paid OHIP premiums on behalf of their employees before the EHT was implemented in 1990. Thus, the imposition of this tax represented a large jump in payroll taxes, but less of an increase in indirect labour costs to employers to finance the health care system. Employers' contribution to the health care system (OHIP premiums prior to 1990, payroll taxes thereafter) amounted to 1.2% of total payrolls in 1983, 0.9% in 1989, 1.7% in 1990 (the year when the EHT was introduced) and 1.8% in 1993. This is not the case in the other three provinces, as neither employers nor employees paid health care premiums prior to the introduction of the tax. Hence, the implementation of the tax in Quebec, Manitoba and Newfoundland represented an increase in indirect labour costs to employers, equal to the tax.

Figure 6: Effective Payroll Tax Rates by Province in Canada, 1961-1993



Change of Total Effective Payroll Tax Rates: Role of Component

Table 3 reports the contribution of each component to total effective payroll tax rate changes in Canada as well as in each province between 1961 and 1993. For Canada as a whole, the expansion of UI premiums has consistently been responsible for the largest share of the rise in the effective payroll tax rate throughout the period --- accounting for 53% of the overall rate hike in the 1970s, 42.7% in the 1980s and over three-quarters since 1990. Increasing C/QPP contributions represented 16.3% of the rate increase in the 1980s and 19.3% since 1990. Rising workers compensation premiums accounted for 23.8% of the rate hike in the 1970s and 12.2% in the 1980s. And the introduction/expansion of the health/education tax contributed to 24% of the rate increase in the 1970s and 28.8% in the 1980s. Since 1990, both WC and H/E tax have played little role in the rise of the national rate.

Although the contribution of each component to the growth of total effective payroll tax rates differs considerably from one province to another, it is obvious that UI represents the lion's share of the rise in the effective payroll tax rates in every province. Between 1961 and 1993, UI contributed to over half of the rate hike in all the six provinces that do not levy the H/E tax, and close to 40% in the four provinces that levy the H/E tax except Quebec. UI's contribution to the rise of the provincial effective payroll tax rates is even greater in more recent years. In the 1980s, rising UI premiums accounted for over 70% of the rate increase in the six provinces without the H/E tax and over one-third in the four provinces with the H/E tax. And in the 1990s, UI contributed to over three-quarters of the rate hike in every province except Newfoundland.

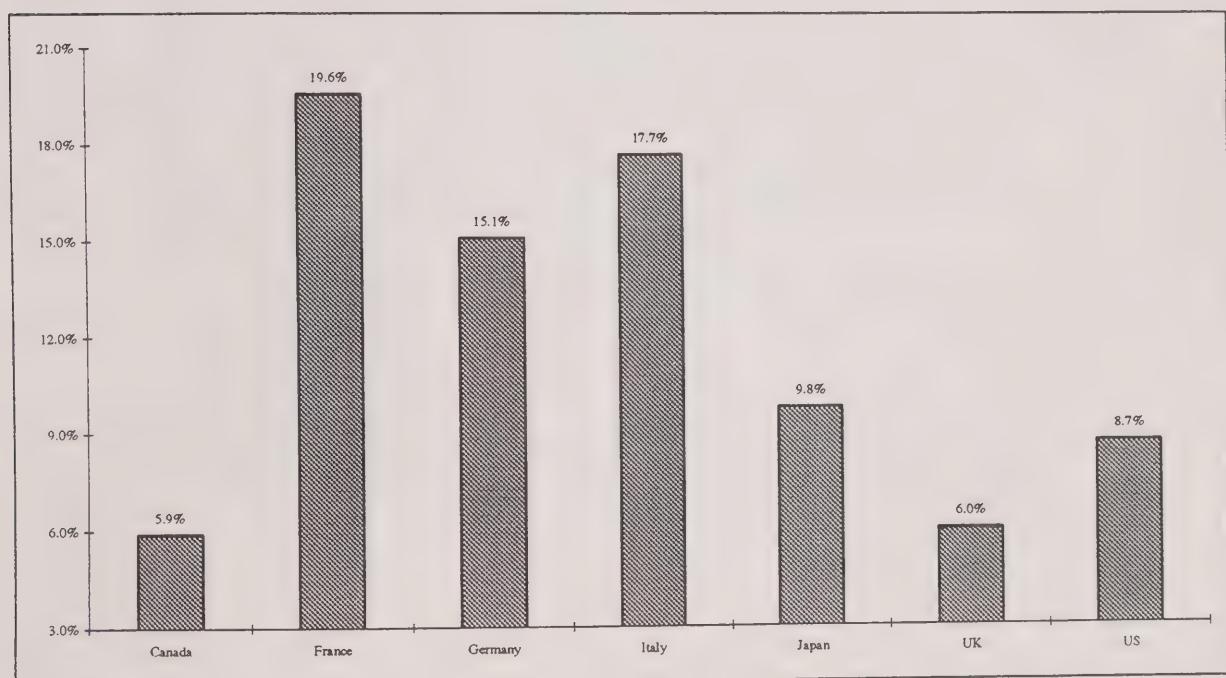
Table 3: Total Effective Payroll Tax Rate Change and Contribution of Each Component by Province in Canada, 1961-1993

	Canada	Nfld	PEI	NS	NB	Que.	Ont	Man	Sask	Alta	BC
1961-1993: Percentage Point Rate Change											
% Contribution	9.5	9.8	7.9	8.0	7.8	11.8	9.6	10.2	7.8	7.4	7.1
UI	39.4	38.6	50.8	51.0	52.2	32.0	38.0	43.0	53.7	51.4	49.8
C/QPP	34.3	35.1	44.2	43.9	45.0	28.0	33.0	34.2	42.8	43.1	45.3
WC	8.8	11.4	5.0	5.1	2.8	9.3	10.4	6.4	3.4	5.5	4.9
H/E	17.5	14.9	n.a.	n.a.	n.a.	30.7	18.6	16.4	n.a.	n.a.	n.a.
1961-1970: Percentage Point Rate Change											
% Contribution	1.8	1.9	2.2	2.3	2.2	1.9	1.6	2.3	2.1	2.1	2.0
UI	-17.2	-25.3	-3.2	-11.5	-7.7	-18.8	-23.3	-4.2	0.6	-6.3	-13.8
C/QPP	120.2	119.0	101.1	115.5	112.2	117.7	131.1	99.8	112.3	109.1	114.1
WC	-4.1	6.3	2.0	-4.0	-4.5	-2.8	-7.8	4.4	-12.8	-2.8	-0.3
H/E	1.1	n.a.	n.a.	n.a.	n.a.	3.9	n.a.	n.a.	n.a.	n.a.	n.a.
1970-1980: Percentage Point Rate Change											
% Contribution	1.5	0.9	1.3	1.1	0.9	2.8	1.1	0.7	1.2	1.1	1.1
UI	53.0	98.8	61.2	87.8	94.7	27.1	79.2	120.1	66.4	79.4	57.9
C/QPP	-0.7	16.6	26.1	-8.7	7.4	-0.2	-1.5	-10.0	-2.6	4.4	-10.1
WC	23.8	-15.5	12.7	20.9	-2.1	21.4	22.3	-10.1	36.2	16.1	52.2
H/E	24.0	n.a.	n.a.	n.a.	n.a.	51.7	n.a.	n.a.	n.a.	n.a.	n.a.
1980-1990: Percentage Point Rate Change											
% Contribution	4.2	3.9	2.6	2.5	2.7	5.1	5.0	5.1	2.7	2.4	2.2
UI	42.7	46.1	70.9	73.3	65.7	37.2	34.6	38.9	72.3	71.5	81.7
C/QPP	16.3	15.8	23.7	23.7	20.8	15.0	13.7	15.2	26.1	22.4	31.6
WC	12.2	24.8	5.3	3.1	13.6	10.3	17.5	12.7	1.7	6.1	-13.3
H/E	28.8	13.3	n.a.	n.a.	n.a.	37.4	34.2	33.1	n.a.	n.a.	n.a.
1990-1993: Percentage Point Rate Change											
% Contribution	1.9	3.0	1.7	2.1	1.9	2.0	1.9	2.0	1.8	1.8	1.9
UI	75.9	51.4	82.2	75.1	82.8	72.8	75.5	81.4	79.0	75.0	75.6
C/QPP	19.3	12.6	15.5	15.3	18.8	16.9	20.5	21.7	18.3	17.3	20.1
WC	1.7	5.1	2.3	9.6	-1.6	1.3	0.3	-1.6	2.7	7.7	4.3
H/E	3.1	30.8	n.a.	n.a.	n.a.	9.0	3.7	-1.4	n.a.	n.a.	n.a.

3. An International Perspective

By international standards, how does Canada fare in terms of payroll taxation? According to data complied by the OECD, total payroll taxes paid by employers and employees in Canada amounted to 5.9% of GDP in 1993. As shown in Figure 7 and Table 4, that is the lowest among the G-7 countries --- compared to 6.0% of GDP in the UK, 8.7% in the US, 9.8% in Japan, 15.1% in Germany, 17.7% in Italy and 19.6% in France. That is also considerably lower than the 10.2% of GDP average among all OECD members countries, the 11.6% of GDP average among European OECD member countries, or the 12.4% of GDP average among European Community member countries. In fact, among the 22 OECD member countries listed, Canada's payroll taxes ranked the 5th lowest in 1993, only higher than that of Denmark, Iceland, Ireland and Turkey.

Figure 7: Payroll Taxes as % of GDP among G-7 Countries, 1993



Note: The same as OECD's social security contributions (2000).

Source: OECD, Revenue Statistics of OECD Member Countries, 1965-1994.

Table 4: Payroll Taxes as % of GDP among OECD Countries, 1965-1993

	1965	1975	1985	1990	1991	1992	1993
Austria	8.6	10.7	13.7	13.6	13.7	14.3	14.8
Belgium	9.8	13.3	15.7	15.4	15.9	16.0	16.3
Canada	1.4	3.3	4.5	5.2	5.7	6.0	5.9
Denmark	1.6	0.5	1.9	1.5	1.5	1.6	1.6
Finland	2.1	5.7	7.1	9.9	11.3	10.9	12.1
France	11.8	15.0	19.3	19.3	19.2	19.4	19.6
Germany	8.5	12.2	13.9	13.7	14.7	14.9	15.1
Greece	6.9	7.5	12.5	11.7	12.4	12.7	13.9
Iceland	2.1	0.8	0.7	1.0	2.2	2.5	2.5
Ireland	1.6	4.1	5.3	5.2	5.4	5.5	5.6
Italy	8.7	12.0	12.0	12.9	13.1	13.3	17.7
Japan	4.0	6.1	8.4	9.1	9.3	9.4	9.8
Luxembourg	9.9	12.6	12.5	11.6	11.9	12.3	12.7
Netherlands	10.1	16.5	19.5	16.7	17.6	18.3	18.3
Norway	4.0	11.1	9.8	12.1	12.2	12.4	11.5
Portugal	4.0	8.5	8.2	8.4	8.6	8.5	8.4
Spain	4.2	9.3	11.9	12.2	12.4	13.2	13.4
Sweden	4.2	8.5	12.5	15.1	15.1	14.4	13.8
Switzerland	4.7	8.6	10.3	10.4	10.7	11.0	12.4
Turkey	0.6	1.5	2.2	3.9	4.1	4.6	4.6
United Kingdom	4.7	6.2	6.8	6.2	6.2	6.4	6.0
United States	4.2	7.1	8.4	8.7	8.8	8.8	8.7
Unweighted Average:							
OECD Total	4.9	7.6	9.0	9.3	9.7	9.9	10.2
OECD Europe	5.7	8.7	10.3	10.6	11.0	11.2	11.6
EC	6.8	9.8	11.6	11.2	11.6	11.8	12.4

Note: The same as OECD's social security contributions (2000).

Source: OECD, Revenue Statistics of OECD Member Countries, 1965-1994.

4. Summary and Conclusion

Do payroll taxes kill jobs, reduce wages or raise prices? Are payroll taxes more or less effective and desirable relative to alternative forms of taxation? Questions regarding the economic impacts of payroll taxes like these remain unresolved and the search for answers continues. In contributing to the on-going research and debate, this paper has outlined the structure of overall payroll taxes, and documented evidence on the level, growth and role of each component over the last three decades for Canada and for each province.

Our main findings are i) payroll taxes have increased considerably over the last three decades in Canada as a whole and in every province; ii) payroll taxes represent an increasingly important source of revenues for both the federal and provincial governments; iii) the structure, level, growth and role of each component of payroll taxes vary remarkably from one province to another; iv) rising UI premiums have been the largest contributor to the rise in payroll taxes in recent years across every province in the country; and v) in spite of the significant growth in recent years, payroll taxes are still much lower in Canada than among most other western industrialized countries.

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Appendix

Table A0

Payroll Taxes by Province in Canada, 1961-1993 (thousands of dollars)

	Canada	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
61	414,163	6,684	1,106	12,721	9,654	113,732	169,669	15,756	12,182	26,738	45,921
62	424,965	7,136	1,196	13,005	10,594	114,101	176,540	16,319	12,217	27,296	46,561
63	438,124	7,584	1,279	13,577	11,316	115,709	183,699	16,729	12,862	28,003	47,366
64	457,722	7,922	1,282	13,977	11,885	119,432	192,574	17,634	13,164	29,291	50,561
65	504,625	8,663	1,454	15,171	13,163	132,148	213,229	18,383	14,192	32,815	55,407
66	1,295,640	20,053	3,520	38,094	30,282	346,096	540,096	49,914	40,036	82,604	144,945
67	1,393,669	21,494	3,997	40,649	32,911	372,254	568,377	56,191	42,117	92,019	163,660
68	1,506,280	23,978	4,197	44,301	34,105	405,725	611,277	63,907	46,302	101,486	171,002
69	1,704,916	25,253	5,614	49,418	39,256	454,394	694,241	72,125	48,281	125,920	190,414
70	1,775,608	27,312	4,949	52,524	40,711	473,248	718,243	75,355	46,388	130,764	206,114
71	1,904,374	29,072	5,480	54,113	42,886	566,676	730,905	76,904	45,665	130,353	222,320
72	2,308,313	36,519	6,706	64,360	50,514	687,347	909,210	88,836	56,115	154,044	254,662
73	2,820,030	42,825	8,062	79,137	60,728	846,273	1,090,732	106,090	70,885	192,433	322,865
74	3,853,701	58,034	11,255	106,140	84,278	1,135,699	1,486,300	145,893	100,776	277,035	448,291
75	4,611,706	70,564	14,431	127,855	104,087	1,346,032	1,763,826	176,903	136,508	356,015	515,485
76	5,943,841	85,576	15,920	154,810	126,371	1,810,837	2,228,798	216,576	175,459	459,171	670,323
77	6,421,083	91,250	19,702	164,511	130,533	1,979,408	2,381,953	224,141	192,268	523,004	714,313
78	7,084,836	98,478	21,851	181,585	140,559	2,226,299	2,560,755	236,452	209,450	605,114	804,293
79	7,632,090	103,038	23,333	193,655	150,708	2,376,235	2,730,537	242,581	221,891	692,799	897,312
80	8,502,916	114,471	25,044	215,408	164,726	2,678,389	2,916,151	272,886	237,778	819,545	1,058,517
81	11,508,947	152,107	31,633	276,767	213,542	3,810,098	3,801,251	356,981	310,612	1,140,120	1,415,838
82	12,345,384	159,549	32,859	292,007	224,468	4,093,970	4,065,594	431,099	324,731	1,240,846	1,480,261
83	15,095,506	203,432	42,508	373,224	291,106	4,814,275	5,199,350	589,643	418,126	1,442,986	1,720,855
84	16,678,467	228,319	47,650	417,014	318,069	5,207,158	6,018,686	648,613	454,955	1,503,710	1,834,295
85	18,549,016	247,295	52,962	467,377	351,831	5,669,990	6,917,652	724,179	498,735	1,647,004	1,971,990
86	20,512,245	260,604	57,007	501,600	382,013	6,319,148	7,879,472	791,740	527,168	1,755,075	2,038,418
87	22,905,774	293,097	62,972	545,648	424,654	7,183,793	8,988,073	921,237	562,855	1,814,412	2,109,031
88	25,625,935	332,114	71,301	603,839	467,660	8,017,445	10,092,188	992,715	603,240	2,016,586	2,428,847
89	26,110,065	331,838	72,234	593,264	473,700	8,218,831	10,272,311	971,673	575,104	2,046,834	2,554,275
90	31,917,374	414,029	86,070	696,987	546,951	9,065,433	13,902,625	1,084,086	667,389	2,431,107	3,022,698
91	34,671,035	488,028	97,080	787,592	613,523	9,521,920	15,099,156	1,184,467	760,335	2,708,599	3,410,335
92	38,694,065	543,669	109,356	897,091	708,062	10,701,377	16,516,143	1,324,739	861,679	3,029,019	4,002,931
93	40,531,457	561,126	115,047	909,004	720,457	11,119,458	17,323,922	1,363,278	878,935	3,247,526	4,292,704

Table A1

Average Payroll Taxes per Employee by Province in Canada, 1966-1993 (1993 dollars)

	Canada	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
66	\$803	\$731	\$451	\$715	\$730	\$766	\$893	\$638	\$549	\$668	\$951
67	\$804	\$734	\$491	\$713	\$757	\$768	\$873	\$683	\$550	\$693	\$977
68	\$825	\$791	\$513	\$743	\$746	\$810	\$884	\$724	\$571	\$709	\$958
69	\$865	\$790	\$619	\$773	\$821	\$849	\$926	\$772	\$566	\$805	\$960
70	\$852	\$805	\$538	\$780	\$806	\$845	\$899	\$772	\$530	\$785	\$973
71	\$865	\$792	\$545	\$778	\$801	\$958	\$864	\$746	\$503	\$746	\$981
72	\$964	\$909	\$649	\$859	\$858	\$1,086	\$978	\$802	\$582	\$800	\$1,025
73	\$1,029	\$907	\$661	\$920	\$907	\$1,161	\$1,032	\$844	\$661	\$872	\$1,122
74	\$1,181	\$1,089	\$768	\$1,016	\$1,066	\$1,323	\$1,180	\$974	\$805	\$1,027	\$1,284
75	\$1,264	\$1,181	\$874	\$1,114	\$1,183	\$1,407	\$1,255	\$1,080	\$952	\$1,150	\$1,318
76	\$1,467	\$1,275	\$887	\$1,240	\$1,308	\$1,725	\$1,431	\$1,192	\$1,086	\$1,282	\$1,536
77	\$1,466	\$1,264	\$1,009	\$1,241	\$1,284	\$1,761	\$1,415	\$1,154	\$1,086	\$1,309	\$1,499
78	\$1,475	\$1,263	\$1,009	\$1,246	\$1,248	\$1,829	\$1,388	\$1,119	\$1,094	\$1,342	\$1,515
79	\$1,387	\$1,145	\$958	\$1,176	\$1,172	\$1,714	\$1,292	\$1,019	\$1,020	\$1,300	\$1,482
80	\$1,356	\$1,099	\$910	\$1,146	\$1,130	\$1,698	\$1,229	\$1,018	\$974	\$1,299	\$1,491
81	\$1,612	\$1,310	\$1,037	\$1,325	\$1,301	\$2,157	\$1,405	\$1,194	\$1,127	\$1,527	\$1,718
82	\$1,649	\$1,308	\$1,036	\$1,324	\$1,316	\$2,256	\$1,420	\$1,347	\$1,081	\$1,562	\$1,747
83	\$1,911	\$1,598	\$1,196	\$1,581	\$1,605	\$2,486	\$1,718	\$1,736	\$1,302	\$1,769	\$1,954
84	\$1,998	\$1,719	\$1,274	\$1,631	\$1,687	\$2,534	\$1,862	\$1,808	\$1,367	\$1,784	\$2,017
85	\$2,110	\$1,814	\$1,352	\$1,791	\$1,761	\$2,614	\$2,017	\$1,946	\$1,427	\$1,870	\$2,063
86	\$2,218	\$1,815	\$1,394	\$1,834	\$1,818	\$2,789	\$2,172	\$2,031	\$1,454	\$1,916	\$2,002
87	\$2,300	\$1,908	\$1,442	\$1,857	\$1,859	\$2,932	\$2,283	\$2,230	\$1,480	\$1,884	\$1,923
88	\$2,381	\$1,958	\$1,502	\$1,877	\$1,900	\$3,040	\$2,362	\$2,286	\$1,522	\$1,933	\$2,035
89	\$2,270	\$1,792	\$1,452	\$1,726	\$1,810	\$2,943	\$2,253	\$2,118	\$1,399	\$1,830	\$1,932
90	\$2,672	\$2,168	\$1,647	\$1,935	\$1,978	\$3,123	\$2,963	\$2,259	\$1,564	\$2,078	\$2,165
91	\$2,881	\$2,540	\$1,878	\$2,177	\$2,200	\$3,269	\$3,246	\$2,459	\$1,737	\$2,229	\$2,349
92	\$3,197	\$2,925	\$2,087	\$2,513	\$2,478	\$3,665	\$3,543	\$2,768	\$1,981	\$2,470	\$2,669
93	\$3,273	\$3,017	\$2,171	\$2,546	\$2,476	\$3,757	\$3,614	\$2,782	\$1,998	\$2,594	\$2,750

Note: Current dollars are converted into constant dollars by GDP deflator (1993=100).

Table A2
Payroll Taxes as % of GDP by Province in Canada, 1961-1993

	Canada	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
61	1.0%	1.3%	1.0%	1.2%	1.2%	1.1%	1.0%	0.9%	0.8%	0.8%	1.1%
62	1.0%	1.3%	1.0%	1.1%	1.3%	1.0%	1.0%	0.8%	0.6%	0.8%	1.1%
63	0.9%	1.3%	1.0%	1.1%	1.3%	0.9%	1.0%	0.8%	0.5%	0.7%	1.0%
64	0.9%	1.2%	0.9%	1.1%	1.2%	0.9%	0.9%	0.8%	0.6%	0.7%	1.0%
65	0.9%	1.2%	0.9%	1.1%	1.2%	0.9%	0.9%	0.7%	0.6%	0.7%	0.9%
66	2.0%	2.4%	2.0%	2.5%	2.5%	2.1%	2.1%	1.9%	1.4%	1.6%	2.2%
67	2.0%	2.5%	2.2%	2.5%	2.6%	2.1%	2.0%	1.9%	1.5%	1.7%	2.3%
68	2.0%	2.4%	2.1%	2.4%	2.4%	2.1%	1.9%	2.0%	1.6%	1.7%	2.2%
69	2.1%	2.3%	2.6%	2.4%	2.6%	2.2%	2.0%	2.1%	1.5%	1.9%	2.1%
70	2.0%	2.3%	2.1%	2.4%	2.4%	2.1%	1.9%	2.0%	1.5%	1.8%	2.2%
71	2.0%	2.2%	2.1%	2.3%	2.4%	2.3%	1.8%	2.0%	1.3%	1.7%	2.1%
72	2.1%	2.7%	2.3%	2.4%	2.4%	2.5%	2.0%	2.0%	1.6%	1.7%	2.1%
73	2.2%	2.7%	2.2%	2.5%	2.5%	2.7%	2.1%	2.1%	1.6%	1.7%	2.2%
74	2.5%	3.0%	2.7%	3.0%	3.0%	3.1%	2.4%	2.4%	1.7%	1.8%	2.6%
75	2.7%	3.2%	3.1%	3.3%	3.3%	3.3%	2.6%	2.6%	2.0%	1.9%	2.6%
76	3.0%	3.2%	2.8%	3.4%	3.5%	3.8%	2.9%	2.8%	2.2%	2.2%	2.9%
77	3.0%	3.0%	3.3%	3.3%	3.3%	3.8%	2.8%	2.7%	2.4%	2.1%	2.8%
78	2.9%	3.1%	3.2%	3.3%	3.2%	3.8%	2.8%	2.6%	2.3%	2.1%	2.8%
79	2.8%	2.6%	3.0%	3.2%	2.8%	3.7%	2.6%	2.4%	2.1%	2.0%	2.7%
80	2.8%	2.8%	3.0%	3.4%	3.3%	3.7%	2.5%	2.4%	1.9%	1.9%	2.8%
81	3.3%	3.2%	3.1%	3.6%	3.5%	4.7%	2.9%	2.7%	2.1%	2.2%	3.1%
82	3.3%	3.1%	3.1%	3.4%	3.3%	4.8%	3.0%	3.1%	2.2%	2.3%	3.2%
83	3.8%	3.6%	3.6%	3.8%	3.8%	5.3%	3.5%	4.0%	2.7%	2.5%	3.5%
84	3.8%	3.7%	3.6%	3.8%	3.7%	5.2%	3.6%	4.0%	2.7%	2.5%	3.5%
85	3.9%	3.9%	4.0%	3.9%	3.9%	5.3%	3.8%	4.1%	2.9%	2.5%	3.6%
86	4.1%	3.8%	3.8%	3.8%	3.8%	5.4%	3.9%	4.3%	3.1%	3.1%	3.6%
87	4.2%	4.0%	4.0%	3.9%	3.9%	5.5%	4.0%	4.7%	3.3%	3.0%	3.4%
88	4.2%	4.1%	4.0%	4.0%	3.9%	5.6%	4.0%	4.6%	3.3%	3.2%	3.5%
89	4.0%	3.9%	3.8%	3.7%	3.7%	5.5%	3.8%	4.2%	2.9%	3.1%	3.3%
90	4.8%	4.7%	4.3%	4.1%	4.2%	5.9%	5.1%	4.5%	3.2%	3.4%	3.7%
91	5.2%	5.3%	4.6%	4.5%	4.5%	6.1%	5.5%	5.0%	3.7%	3.8%	4.1%
92	5.7%	5.9%	5.1%	5.0%	5.1%	6.8%	6.0%	5.5%	4.3%	4.2%	4.6%
93	5.8%	6.0%	5.1%	5.0%	5.0%	6.9%	6.1%	5.6%	4.1%	4.2%	4.7%

Table A3

Payroll Taxes as % of Federal and Provincial Revenues by Province in Canada, 1961-1993

	Canada	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
61	4.1%	4.6%	3.3%	4.6%	4.5%	4.1%	4.0%	3.8%	3.3%	4.0%	4.6%
62	3.8%	4.0%	3.2%	4.3%	4.7%	3.7%	3.8%	3.8%	2.9%	3.8%	4.5%
63	3.7%	4.3%	3.2%	4.5%	4.8%	3.5%	3.7%	3.8%	2.9%	3.7%	4.2%
64	3.4%	4.0%	3.1%	4.2%	4.4%	3.1%	3.5%	3.4%	2.7%	3.6%	3.9%
65	3.4%	3.6%	3.1%	3.9%	4.1%	3.2%	3.4%	3.2%	2.6%	3.5%	3.7%
66	7.7%	7.7%	6.8%	8.5%	8.6%	7.6%	7.5%	7.7%	6.3%	7.7%	8.8%
67	7.3%	7.1%	6.6%	7.5%	7.7%	7.2%	7.1%	7.5%	6.2%	7.3%	8.8%
68	6.9%	6.8%	5.9%	7.1%	6.8%	7.0%	6.6%	7.5%	6.2%	7.1%	7.8%
69	6.6%	6.1%	6.2%	6.5%	6.7%	6.8%	6.3%	7.0%	5.9%	7.1%	7.0%
70	6.2%	5.8%	5.1%	6.3%	6.2%	6.3%	5.9%	6.5%	5.4%	6.3%	7.1%
71	5.9%	5.1%	4.5%	5.8%	5.6%	6.6%	5.4%	5.9%	4.5%	5.6%	6.7%
72	6.4%	5.9%	4.7%	5.8%	5.7%	7.3%	6.0%	6.0%	4.9%	5.9%	6.7%
73	6.7%	6.2%	5.0%	6.1%	6.4%	7.9%	6.3%	6.5%	5.2%	5.7%	6.8%
74	7.0%	6.5%	5.8%	6.9%	6.9%	8.5%	7.1%	7.1%	4.9%	4.3%	7.7%
75	7.7%	6.8%	5.6%	7.0%	7.4%	9.1%	7.9%	7.7%	5.8%	4.9%	8.1%
76	8.7%	7.3%	5.4%	7.6%	8.1%	10.8%	8.8%	8.4%	6.9%	5.7%	9.0%
77	8.5%	6.8%	6.3%	7.1%	7.4%	10.2%	8.8%	8.1%	6.9%	5.7%	8.5%
78	8.6%	6.6%	6.5%	7.3%	7.2%	10.5%	8.8%	8.2%	6.7%	5.7%	8.7%
79	8.2%	6.2%	6.3%	7.3%	6.9%	10.2%	8.3%	7.4%	5.9%	5.6%	8.4%
80	8.0%	6.3%	5.8%	7.0%	6.7%	10.0%	7.9%	7.4%	5.3%	5.4%	8.7%
81	8.9%	6.9%	6.3%	7.5%	6.8%	11.8%	8.7%	7.9%	5.7%	5.7%	9.8%
82	8.9%	6.7%	5.8%	7.4%	7.0%	12.1%	9.0%	8.8%	6.0%	5.4%	9.5%
83	10.1%	8.0%	7.1%	8.7%	8.4%	13.0%	10.4%	11.0%	7.2%	6.0%	10.6%
84	10.1%	8.2%	6.8%	8.6%	8.2%	12.7%	10.7%	11.2%	7.1%	5.9%	10.6%
85	10.5%	7.8%	7.5%	8.9%	8.5%	12.9%	11.1%	11.5%	7.7%	6.3%	10.8%
86	10.9%	7.8%	7.2%	9.0%	8.3%	13.1%	11.0%	11.5%	8.6%	8.4%	10.3%
87	11.1%	8.0%	7.4%	8.8%	8.3%	13.5%	11.3%	11.9%	8.1%	8.3%	9.6%
88	11.2%	8.3%	7.5%	8.8%	8.3%	13.6%	11.3%	11.4%	8.1%	8.7%	9.9%
89	10.6%	7.9%	7.1%	8.3%	8.0%	13.4%	10.6%	10.8%	6.8%	8.6%	9.3%
90	12.2%	8.9%	7.8%	9.0%	8.5%	13.8%	13.8%	11.5%	7.3%	9.1%	9.9%
91	13.0%	9.9%	8.3%	9.7%	9.2%	14.1%	15.1%	11.8%	8.3%	9.9%	10.5%
92	14.1%	10.7%	9.0%	10.7%	9.7%	15.5%	16.4%	13.0%	9.1%	10.7%	11.4%
93	14.4%	10.9%	9.4%	10.8%	9.6%	15.9%	16.9%	12.9%	9.2%	11.2%	11.5%

Table A4
Effective Payroll Tax Rates by Component in Canada, 1961-1993

	UI	C/QPP	WC	H/E	Total
61	1.41%		0.70%		2.11%
62	1.35%		0.66%		2.02%
63	1.31%		0.64%		1.95%
64	1.24%		0.62%		1.86%
65	1.18%		0.66%		1.84%
66	1.11%	2.41%	0.68%		4.20%
67	1.03%	2.36%	0.70%		4.09%
68	1.08%	2.32%	0.68%		4.07%
69	1.18%	2.26%	0.66%		4.11%
70	1.10%	2.21%	0.63%	0.02%	3.95%
71	0.91%	2.15%	0.59%	0.21%	3.86%
72	1.25%	2.09%	0.62%	0.21%	4.18%
73	1.47%	2.03%	0.70%	0.22%	4.43%
74	2.03%	2.06%	0.79%	0.22%	5.10%
75	2.08%	2.08%	0.86%	0.22%	5.25%
76	2.43%	2.07%	1.04%	0.32%	5.87%
77	2.18%	2.09%	1.07%	0.40%	5.74%
78	2.38%	2.35%	1.17%	0.43%	6.33%
79	1.94%	2.20%	1.06%	0.39%	5.59%
80	1.91%	2.20%	0.99%	0.39%	5.49%
81	2.58%	2.22%	1.04%	0.63%	6.48%
82	2.46%	2.20%	1.10%	0.75%	6.52%
83	3.49%	2.27%	1.11%	0.77%	7.64%
84	3.58%	2.33%	1.17%	0.76%	7.85%
85	3.73%	2.41%	1.23%	0.75%	8.12%
86	3.80%	2.47%	1.35%	0.78%	8.41%
87	3.82%	2.55%	1.45%	0.83%	8.64%
88	3.81%	2.62%	1.57%	0.81%	8.81%
89	3.15%	2.75%	1.58%	0.82%	8.30%
90	3.71%	2.88%	1.51%	1.60%	9.70%
91	4.28%	3.03%	1.39%	1.67%	10.38%
92	5.09%	3.14%	1.46%	1.65%	11.35%
93	5.15%	3.25%	1.54%	1.66%	11.60%

Table A5

Effective Payroll Tax Rates by Province in Canada, 1961-1993

	Canada	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
61	2.11%	2.35%	2.11%	2.41%	2.40%	2.15%	2.07%	1.74%	1.92%	2.03%	2.33%
62	2.02%	2.41%	2.16%	2.33%	2.50%	1.97%	2.00%	1.69%	1.86%	1.94%	2.21%
63	1.95%	2.35%	2.28%	2.33%	2.51%	1.86%	1.94%	1.65%	1.87%	1.90%	2.10%
64	1.86%	2.27%	2.13%	2.23%	2.41%	1.74%	1.86%	1.64%	1.78%	1.84%	2.03%
65	1.84%	2.20%	2.18%	2.21%	2.40%	1.74%	1.84%	1.58%	1.74%	1.84%	1.94%
66	4.20%	4.50%	4.70%	5.03%	4.88%	4.08%	4.14%	3.93%	4.45%	4.12%	4.48%
67	4.09%	4.49%	4.69%	4.90%	4.88%	3.95%	3.96%	3.92%	4.25%	4.06%	4.57%
68	4.07%	4.52%	4.61%	4.89%	4.75%	4.07%	3.86%	4.04%	4.38%	4.05%	4.44%
69	4.11%	4.33%	5.51%	4.82%	4.84%	4.14%	3.90%	4.16%	4.27%	4.35%	4.31%
70	3.95%	4.27%	4.33%	4.73%	4.63%	4.02%	3.69%	4.07%	4.02%	4.12%	4.32%
71	3.86%	4.12%	4.39%	4.48%	4.37%	4.43%	3.42%	3.87%	3.70%	3.75%	4.11%
72	4.18%	4.81%	4.80%	4.67%	4.65%	4.81%	3.81%	4.05%	4.08%	3.94%	4.12%
73	4.43%	4.70%	4.81%	4.97%	4.82%	5.17%	3.99%	4.23%	4.53%	4.21%	4.38%
74	5.10%	5.20%	5.68%	5.47%	5.59%	5.87%	4.65%	4.83%	5.24%	4.90%	5.03%
75	5.25%	5.34%	5.93%	5.67%	5.77%	6.01%	4.82%	5.03%	5.70%	5.14%	4.94%
76	5.87%	5.69%	5.57%	6.11%	6.10%	7.03%	5.30%	5.49%	6.10%	5.57%	5.58%
77	5.74%	5.45%	6.11%	5.96%	5.86%	6.97%	5.19%	5.23%	6.07%	5.46%	5.29%
78	6.33%	5.88%	6.77%	6.58%	6.31%	7.84%	5.57%	5.51%	6.61%	6.32%	5.95%
79	5.59%	5.06%	5.81%	5.66%	5.59%	6.92%	4.96%	4.73%	5.61%	5.32%	5.42%
80	5.49%	5.17%	5.66%	5.80%	5.55%	6.87%	4.79%	4.74%	5.24%	5.21%	5.41%
81	6.48%	6.12%	6.56%	6.62%	6.39%	8.76%	5.45%	5.44%	5.96%	5.88%	6.22%
82	6.52%	5.89%	6.13%	6.39%	6.18%	9.02%	5.44%	6.01%	5.60%	5.82%	6.30%
83	7.64%	7.25%	7.49%	7.62%	7.56%	10.24%	6.51%	7.77%	6.85%	6.82%	7.25%
84	7.85%	7.72%	7.68%	7.80%	7.62%	10.27%	6.85%	7.93%	6.96%	6.90%	7.53%
85	8.12%	7.64%	7.68%	7.59%	7.70%	10.50%	7.37%	8.53%	7.02%	6.78%	7.56%
86	8.41%	7.70%	7.71%	7.71%	7.81%	11.02%	7.69%	8.76%	7.18%	7.07%	7.47%
87	8.64%	7.88%	7.84%	7.78%	8.05%	11.44%	7.91%	9.66%	7.46%	7.18%	7.10%
88	8.81%	8.19%	7.98%	8.05%	8.15%	11.83%	7.95%	9.86%	7.67%	7.33%	7.45%
89	8.30%	7.63%	7.48%	7.42%	7.56%	11.43%	7.41%	9.23%	7.15%	6.96%	7.01%
90	9.70%	9.11%	8.29%	8.29%	8.29%	11.99%	9.81%	9.85%	7.90%	7.64%	7.60%
91	10.38%	10.57%	8.97%	9.24%	9.10%	12.41%	10.62%	10.68%	8.65%	8.19%	8.29%
92	11.35%	11.88%	9.73%	10.37%	10.24%	13.68%	11.41%	11.70%	9.63%	8.96%	9.38%
93	11.60%	12.14%	9.99%	10.39%	10.16%	14.00%	11.70%	11.90%	9.74%	9.42%	9.46%

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